sustainable development commission

Wales energy route map consultation: SDC response

SDC submission to the Welsh Assembly Government's consultation on 'Energy Wales: route map to a clean, low-carbon and more competitive energy future for Wales'

September 2005

Introduction

The Sustainable Development Commission (SDC) welcomes the opportunity to input into the Assembly's consultation on a draft Wales Energy Route Map. We strongly support the development of this route map, which could help guide the transition to a low carbon economy in Wales. This will bring a number of complementary benefits, such as reductions in harmful greenhouse gases, improved energy security, and new job opportunities in the clean energy sector.

A successful energy policy for the carbon-constrained world must be based on the principles of sustainable development, as agreed in 'One future – different paths', the UK's shared framework for sustainable development. Our submission will therefore be based on these principles, taking into account already agreed action from the 2003 Energy White Paper, and the Welsh Energy Strategy. This approach will be consistent with, and support, the Assembly's legal duty for sustainable development and its 'Sustainable Development Scheme'.

We have structured our response to fit with the priority actions listed in the action plan table.

General Points

- The Route Map is not clear on what powers the Assembly has over energy policy questions and we believe this should be clarified from the start, acting as a signpost to which matters in this area are devolved/reserved. We recommend that the route map concentrates specifically on those areas of energy policy where the Assembly can have an effective influence, whilst making clear those areas where a negotiated approach is required.

- The SDC is supportive of the commitments to renewable electricity production and greater energy efficiency. However, we are unclear as to the benefits of more electricity generation from cleaner, higher efficiency fossil-fuel plants; whether this relates to the substitution of existing plant with improved technology, or simply the addition of new capacity, is very unclear, both here and in the action plan table.

- We believe the terms 'clean energy' and 'cleaner energy' are used almost interchangeably, and in many cases to refer to technologies that are fundamentally unsustainable in the long term. 'Clean energy' is meaningless unless it is used to refer to zero carbon technologies, which may include the use of fossil fuels with carbon capture and storage. 'Cleaner energy' sources may have some relevance to technologies that reduce other forms of pollution (e.g. the installation of flue gas desulphurisation equipment), or the substitution of coal with gas, but this term should be used sparingly and with caution. Increasingly, coal power plants fitted with FGD are the standard, and most plants without this technology will eventually be forced to close as a result of the revised Large Combustion Plants Directive. Therefore, a case could be made for using 'cleaner energy' as a term to refer to more advanced and efficient technologies, such as CHP, rather than standard coal and gas installations.

- The SDC is supportive of energy infrastructure improvements, where they are necessary to deliver progress towards a low carbon economy. Therefore, improvements should be focussed on the integration of large and small-scale renewables, and improving the efficiency of grid operations.

- We strongly support the commitment to achieving measurable carbon dioxide emissions reductions to 2020, and recommend that the measures identified in the route map are quantified in terms of their potential emissions savings, and contribution to agreed targets. A carbon index could be added to the action plan table to provide this information, making use of the analysis done for the Wales Ecological Footprint project.

- The SDC advises that in the interests of consistency, references to 'climate change' adhere to use of this phrase alone. Phrases

such as 'global warming' are generally considered inaccurate, and are not consistent with other government and academic documents.

- We recommend that the Assembly considers adopting the forthcoming Code for Sustainable Buildings in Wales, by making it a requirement for *all* public-funded construction projects (including housing, commercial developments and public buildings) as has been committed for England. The Code is being developed to establish a single national standard for sustainable design and construction to produce a step change reduction in the impact of buildings and construction across the industry.

Raising Awareness and Focussing Support

1.1 We support the inclusion of awareness raising as a priority action, but this needs to relate to social, environmental and economic issues, and how these connect to energy policy and climate change.

1.2 We suggest that an appropriate objective for this section would be to encourage carbon awareness in all sectors of society, with the aim of reducing consumption and increasing support for renewables.

1.3 An appropriate milestone would be a carbon neutral public sector by 2020, which was one of the SDC's central recommendations to the Climate Change Programme Review. This could be achieved in part through a commitment to a sustainable design and construction standard using a tool such as the forthcoming Code for Sustainable Buildings for all new publicly procured public buildings, a commitment to refurbish all existing public buildings up to a high standard, and steps to encourage on-site renewable energy generation (see paragraph 3.2 in microgeneration below).

Energy Efficiency

2.1 We welcome the high profile given to energy efficiency in the document, and the implementation of Energy Saving Wales. However, we would like to see the inclusion of specific reduction targets, linked to clear expectations of future demand.

2.2 We suggest the removal of micro-renewables from this section, as microgeneration is too important to be categorised within energy efficiency. Microgeneration should be included within priority action 3 – renewable energy development (see paragraph 3.2 below).

2.3 Whilst we welcome the establishment of the Energy Saving Wales Portal, there is a risk that this will only reach those already won over, and will not reach key target audiences, such as the fuel poor. We suggest that this strategy includes provision for road-show events, and targeted marketing aimed at priority groups (for example, using council tax bills or benefits statements).

Renewable Energy Development

3.1 The SDC welcomes the commitments to renewable energy development, but some of the wording is rather non-committal, and contrary to the sentiments expressed by the Minister in his introduction. The tasks and milestones should be clear in specifying deliverable outcomes, whilst highlighting those areas where Assembly will need to work in partnership.

3.2 As we state above, this section should include a specific commitment to encourage microgeneration, which has a key role to play in future energy supply and should be a central part of the route map. The SDC is currently finalising its response to the DTI's consultation on a Microgeneration Strategy, but we will be recommending that more emphasis is given to using a combination of planning policy, building regulations and the forthcoming Code for Sustainable Buildings

to stimulate the demand for microgeneration in the new-build sector.

3.3 Following from this, we recommend that the Assembly encourage all local planning authorities in Wales to require an appropriate mix of high levels of energy efficiency (above Building Regulations) and microgeneration in all new developments. The objectives of this would be to make real progress towards carbon-reduction targets, to encourage the development of the renewables market, and to stimulate development of a sustainable construction supply chain. The amount of carbon saved through such measures should be quantified together with others in the Route Map to clarify Wales' contribution to UK reduction targets.

3.4 Energy efficiency and microgeneration are also the sustainable solutions to tackling fuel poverty. We would like to see Wales become a beacon for action in this important area of housing and planning policy. Our understanding is that current measures aimed at the retrofit market (the microgeneration element of EEC, and renewable energy grants) are administered at the UK/GB level, although the Assembly may want to consider what more it can offer to support the retrofit market. We will forward a copy of our response to the Microgeneration Strategy consultation once it is ready, which will contain further details on these measures, and our recommendations for both the new-build and retrofit market.

3.5 On biomass, the SDC recently completed a research project looking at the potential for biomass heat in Scotland. We identified a number of opportunities where biomass could be cost effective, especially in areas off the gas network. We would be very happy to advise the Assembly further on this issue, as certainly there are a number of similarities between Scotland and Wales in this regard. A follow-up report looking at the potential for biomass heat in Wales would be a good way forward, and this should be undertaken as soon as possible.

3.6 The SDC recommends that the Assembly concentrate only on biomass heat, which does not benefit from the subsidies available to biomass in electricity generation. As a result of liberalised electricity markets, the market will decide biomass take-up in the power sector, and it would not be appropriate for targets to be set that are technology or fuel-source specific.

3.7 Promotion of energy efficiency and microgeneration including biomass through procurement policies in the public sector is important for demonstrating leadership as well as significantly influencing their role in the marketplace.

3.8 The SDC notes the enthusiasm in the draft route map for marine renewables, and we applaud this. We would suggest that marine renewables should be a priority area for the proposed Wales Energy Research Centre (WERC), and that dedicated testing facilities could help position Wales as a key location in the development of this sector.

3.9 The SDC welcomes the commitment to keep open consideration of the Severn barrage option. However, any proposal should be judged against the alternative possibility of using 'tidal lagoon' technology, which may be more environmentally sensitive.

Coal / Carbon Capture and Storage

4.1 We point to our previous comment regarding the use of the term 'clean coal', which would not yet apply to the coal sector in Wales, or anywhere in the UK.

4.2 We are concerned over some of the language used in this section, particularly references to encouraging the development of further clean or cleaner coal projects. The only future for coal in Wales should be in relation to carbon capture and storage technologies, which may prove to be one of several future solutions to climate change. However, these technologies are currently unproven, and they could be very expensive to implement. Therefore, while we are

happy to see a commitment to further research on carbon capture and storage, we do not believe there should be further support in Wales for coal as such while it remains a dirty and carbon intensive fuel.

Security of Supply Improvements

5.1 We are very concerned over the commitment to encourage the construction of new large-scale power plants. Firstly, it would not appear to be an appropriate role for the Assembly, or any other part of Government, to take on, in the context of liberalised energy markets. Secondly, this is completely contradictory to the sentiments expressed in other parts of the document, where renewables and energy efficiency are seen as key. Constructing new power plants will not increase security of supply, as Wales is part of the BETTA electricity system and cannot be viewed in isolation. Rather, the construction of new fossil fuel power plants is likely to decrease security of supply, as most of the longer term fuel requirements will have to be met by imports. A suggestion that Wales needs additional generation capacity is at odds with the statements in the next section, which implies that there is a large amount of spare grid capacity from under-used 400kV transmission lines.

5.2 We would like to see greater prominence given to CHP of all sizes, which can make a contribution to security of supply on a local level and contribute to emissions reductions through much greater fuel efficiency. If the Assembly takes on responsibility for Section 36 consents, the SDC would like to see much greater effort given to encouraging CHP at new power plants. This is current policy, but implementation has been poor. There are also huge opportunities available to public sector bodies to take a lead role in promoting CHP, both in their own buildings, and through the planning system. The SDC would also like to see a far greater recognition of the potential of district heating schemes, which offer a future-proof way of delivering carbon savings – e.g. by using gas-fired CHP now, but potentially biomass or some other technology in the future.

Energy Infrastructure Strengthening

6.1 We strongly support moves to strengthen the electricity infrastructure where this is necessary to support the growth of renewable energy.

6.2 As we state above (paragraph 5.1), we do not support the idea that Wales should be actively encouraging the construction of new fossil-based capacity to utilise spare transmission capacity. If there is spare capacity, it would seem more appropriate for Wales to encourage the exploitation of its large renewable energy resources, and to increase generation targets accordingly.

6.3 We welcome the commitment to encourage the process of distribution network adaptation for more efficient connection of microgenerators. As we state above, microgeneration should play a central role in future energy policy, and investment in the distribution network will be required for this to happen. A modern distribution network, with a high penetration of microgenerators, will be more flexible, more resilient, and more efficient.

6.4 Whilst we recognise the carbon and fuel poverty benefits of gas mains extension where this displaces more carbon intensive and expensive fuels, we strongly recommend that each specific proposal is assessed against a robust set of alternatives, which should include a detailed study of biomass potential for the area in question. Our research in Scotland found that biomass could offer a cost effective solution to heating needs in areas off the gas grid, without the need for the large-scale capital investment needed for gas mains extension.

6.5 We would like to see an additional commitment in this section to encouraging district and community heating infrastructure in both new developments and major refurbishment projects. District heating allows for future flexibility of fuel

sources, and can be used to facilitate the uptake of lower carbon technologies on a wider scale. So a gas-fired CHP scheme could in ten years time be converted to a biomass-fired scheme without the replacement of boiler infrastructure on a household-by-household basis.

Drive for Innovation

7.1 The SDC welcomes the proposal to create a Wales Energy Research Centre (WERC), which should tie together the work of academic institutions in this area. However, we also recommend that the WERC proposal takes care to ensure that there is no duplication with the activities of the newly created UK Energy Research Centre, which has an interesting and varied work programme. The WERC should focus its activities on areas where Wales could have a strong locational advantage over other parts of the UK and Europe – for example, in demonstrating tidal electricity generation.

7.2 We would like to see clarification of how the R&D funding for Wales is allocated, who controls it, and how large it is. The route map should be very clear about what impact the Assembly and Welsh Development Agency can have on R&D and innovation, and focus efforts accordingly.

Carbon Dioxide Emissions Reductions

8.1 The SDC would like to see an overt commitment to working with UK partners towards the objectives of Kyoto. Wales should set itself the task of demonstrating UK leadership on the decoupling of carbon emissions from energy consumption, with ambitious targets to match.

8.2 There seems to be an implication that Wales is less able to reduce carbon dioxide emissions than the rest of the UK. A 20% target for 2020 is well below Wales' potential, especially considering the wealth of renewable energy resources that are available. The route map should clearly spell out how Wales intends to achieve 60% cuts in emissions by 2050, and how a 2020 target fits into this strategy. It is hard to see how the proposed 20% target would do this, as it would require at least a doubling of effort post 2020.